

NLSSI Steering Committee and Industry Needs for Seismic R&D and Practical Applications for Economically Ensuring Nuclear Reactor Seismic Safety

October 7th and 8th, University at Buffalo

Objectives:

Day one: Present progress on NLSSI R&D at INL, tour University at Buffalo structural dynamics lab, and discuss future 1D geotechnical laminar box tests.

Day two: Present current R&D activities in the nuclear field that aim to provide best estimate seismic response numerically, and focus on minimizing the influence of beyond design basis earthquakes. Discuss how the use of risk information to quantify margins in existing and advanced reactors and reduce NPP construction cost. Industry representatives will also provide feedback on their needs in seismic R&D. Numerical commercial code vendors will participate, as the aim of current seismic R&D is to implement numerical modeling capabilities into these codes.

Attire: Business Casual

Andrew Whittaker, Justin Coleman, Chandu Bolisetti, Bob Spears, Bob Kennedy, Ian Stevenson, Steve McDuffie, John Richards, Ronaldo Szilard, Annie Kammerer, Allen Levin, Amit Varma, Abhinav Gupta, Jacobo Bielak, Greg Mertz, Farhang Ostadan, Mike Salmon, Mike Cohen, Bob Budnitz, Mohamed Talaat, Ibrahim Almufti, Francois Lancelot, Michael Constantinou, Anthony Tessari, Amjad Aref, M. (Siva) Sivaselvan, Kallol Sett

October 7th University at Buffalo

140 Ketter Hall, Department of Civil Engineering, University at Buffalo

- 8:00 Welcome to University at Buffalo and Introductions Andrew Whittaker
UB Chair Department of Civil, Structural and Environmental Engineering (CSEE)
- 8:15 Introductions and Overview Justin Coleman
INL Seismic Research Group Lead
- 8:30 NLSSI Implementation at Second Soil Site..... Bob Spears
Seismic Researcher
- 10:00 Break
- 10:20 NLSSI Numerical Challenges and Solutions and Implementation into SPRA
..... Chandu Bolisetti
Seismic Researcher
- 11:50 Working Lunch
- 12:50 Tour of University at Buffalo Structural Dynamics Laboratory Andrew Whittaker
- 2:30 Hybrid Simulation in Earthquake Engineering M. Sivaselvan
- 3:00 Presentation of proposed 1D Geotechnical Laminar Box Test for Application in the
Nuclear Industry..... Anthony Tessari, Andrew Whittaker, Justin Coleman,
- 2:30 Interactive Discussion of How to Frame First Set of Geotechnical Laminar Box Tests at
UB..... Andrew/Justin/Anthony
- 4:30 Adjourn
- 6:00 Dinner, home of Andrew Whittaker, 160 Viscount Drive, Williamsville, NY 14221

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October 8th University at Buffalo

140 Ketter Hall, Department of Civil Engineering, University at Buffalo

- 8:00 Purpose and Meeting Objectives Andrew and Justin
- 8:30 Industry/NRC Issues that Could be Resolved with Advanced Numerical Modeling or Technological Advances, Presentations from Industry, EPRI, NRC, DOE, with Break
- 11:30 Lunch
- 12:30 Regulator Gaps in Seismic Isolation Implementation Annie Kammerer
- 1:15 SI Economics Study Justin/John/Andrew
- 1:50 Piping Fragility R&D Abhinav Gupta
- 2:20 NPP Seismic Robustness and use of Risk-Information in Design of Advanced Reactors to Manage Costs Amit/ Andrew/Justin
- 3:00 Adjourn